

## **METHOD AND APPARATUS FOR CONTROLLING A BIAS VOLTAGE OF A MACH-ZEHNDER MODULATOR**

### **ABSTRACT OF THE DISCLOSURE**

A method and apparatus for controlling a bias voltage of a Mach-Zehnder modulator (MZM) use a digital pilot signal and a digital correlation technique to produce a feedback signal for adjusting the bias voltage to the quadrature bias point. Embodiments of the invention include apparatuses performing a non-return-to-zero (NRZ), return-to-zero (RZ), or carrier suppressed RZ (CSRZ) high-speed optical modulation.